Volunteer Firemen

Professional Journal of the Volunteer Firemen's Section of the National Fire Protection Association

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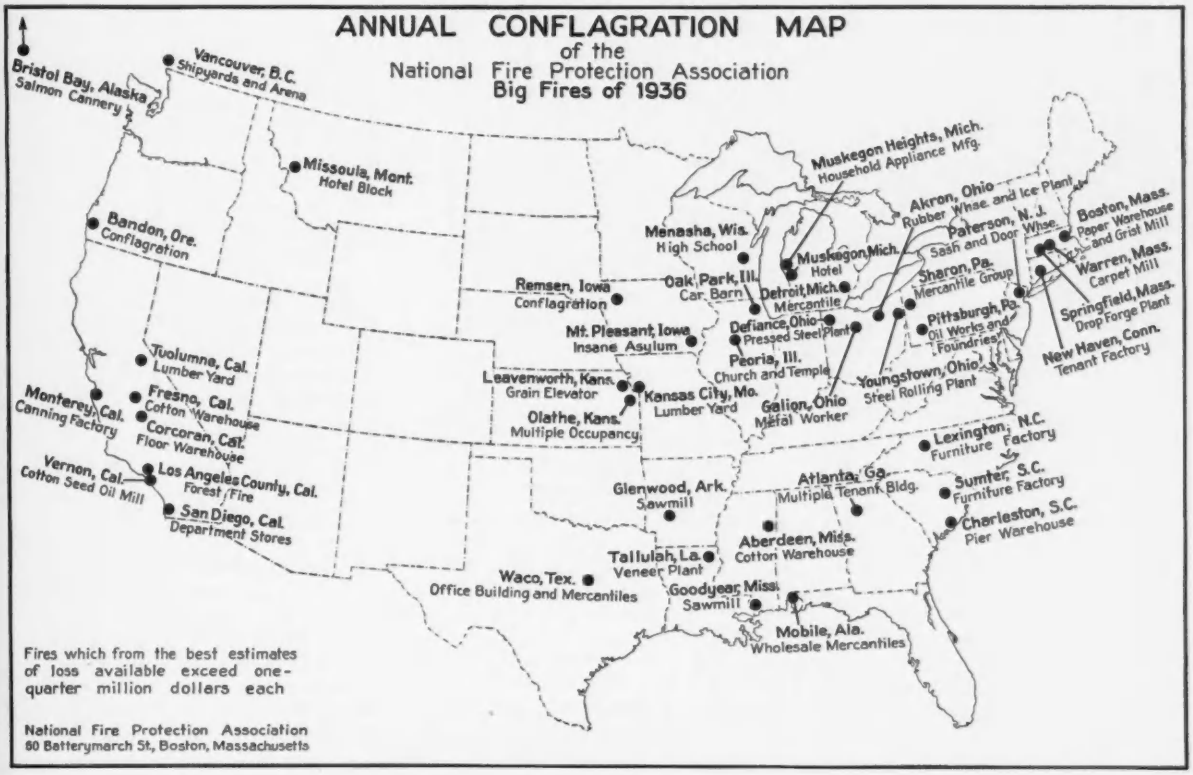
Volume 4, Number 2 **BOSTON, MASSACHUSETTS** **February, 1937**



Forty-Three Biggest Fires in 1936

Losses Mounted With Business Upswing—Number of Large Fires Increased—Many Fought by Volunteers

PRELIMINARY figures indicate that U. S. fire losses for 1936 will be $293,357,245 or an increase of approximately $44,000,000 above the 1935 fire loss. This is, however, still considerably below the average annual loss of $415,000,000 for the past 21 years for which reliable figures are available. Somewhat increased losses were expected for 1936 with the pick-up in business and the rise in commodity values. Canadian losses also increased —the 1936 loss being estimated at $13,200,000 which is an increase of over $400,000 above the 1935 loss.

The N.F.P.A. Department of Fire Record has just completed its tabulation of the largest fires of the year in the United States and Canada. The locations of these fires are shown on the Annual Conflagration Map above. There were a total of 43 fires, each of which caused losses of one-quarter million dollars or more. This is the largest number of such fires in any year since 1932 when 44 such losses occurred. In Canada, the only fire reported in this class was the blaze which destroyed two shipyards and the Arena at Vancouver, B. C., on August 20.

While it is true that most of these large loss fires occurred in cities having paid fire departments, more than one-third of them occurred in smaller communities and were fought by volunteer fire departments. Among these were the two sweeping conflagrations of the year which caused losses of $250,000 or more. The first occurred at Remsen,

One of the largest loss fires fought by volunteer firemen in 1936, a pressed steel plant at Defiance, Ohio, which was destroyed by fire on June 13. Being one of the leading industries of this small city, 400 men were thrown out of work.

Iowa, on July 4, and was reported in the September issue of VOLUNTEER FIREMEN. The other sweeping conflagration destroyed the town of Bandon, Oregon, on September 26, caused a loss of 11 lives, and was reported in the December issue.

Structural deficiencies are the greatest single contributing cause of the large losses in these 43 big fires last year. Such defects included generally inferior construction, excessively large areas without proper division or fire walls, unprotected stair or shaft openings, inaccessible open roof spaces or under-floor spaces, and lack of exposure protection. Hazardous contents of buildings or excessive amounts of burnable stocks also contributed to many of the large losses.

Other leading factors causing large losses were delays in the discovery of fire, or delays in giving an alarm which were usually due to attempts to fight the fire without first calling the fire department. Hindrances to fire fighting such as flood waters, parked cars, and building alterations were other factors. Inadequate private fire protection, inadequate water supplies or failure of water supplies, unfavorable weather conditions, and explosions each contributed to a number of losses.

The large losses in all of these fires may be said to be due to the neglect of proven fire protection rules. Where values in excess of a quarter of a million dollars are involved, fire protection is deserving of more consideration than it appears to have been given in most of these cases. Large areas should be subdivided in a standard manner and adequate fire protection should be provided. In many of these fires, both public and private fire protection facilities were too weak to be effective.

In practically every case these large loss fires might have been prevented or extinguished in their incipiency, if recognized standard measures of fire prevention and fire protection had been completely observed. Automatic sprinklers, for example, might have controlled the great majority of these fires with small loss, and lack of standard automatic sprinkler protection might have been cited as the factor responsible in practically every case. The same might be said of various other forms of protection.

In addition to the two conflagrations previously mentioned, volunteer firemen played principal parts in the fighting of the following large fires.

March 20, Warren, Mass. Carpet Factory. The automatic sprinkler system was old and defective and had a weak water supply. Flood water made the mill pumps inoperative. Fire departments were delayed in responding because of flooded roads. The loss was $343,000.

March 21, Menasha, Wis. High School. The fire occurred when the school was unoccupied. The fire department was unable to cope with the blaze. The loss was $250,000.

March 31, Sumter, S. C. Furniture Factory. A flash fire due to ignition of lacquer vapors opened 536 sprinkler heads, overtaxing the system. There was no space between the buildings and lumber storage yard and firemen were unable to prevent a total loss. The loss was $558,000.

April 31, Sharon, Pa. Lodge and Business Buildings. Fire started in lodge rooms during the early morning and spread to adjoining buildings due to lack of exposure protection. The loss was $280,000.

May 1, Lexington, N. C. Furniture Factory. A flash fire from lacquer vapors overtaxed the sprinkler system. The fire was beyond control when firemen arrived. The loss was $250,000.

June 13, Defiance, Ohio. Pressed Steel Plant. Low water pressure made

D. C. Burkha.

Forest fires late in September burned over 100,000 acres of territory in Southwestern Oregon. This picture shows the fire just after it jumped a road on the morning after it destroyed the town of Bandon.

both public and private streams ineffective. The fire department was poorly equipped and one pumper broke down. The loss was $500,000.

June 19, Goodyear, Miss. Saw and Planing Mill. The mill was 880 ft. long and of combustible construction. Smoke explosions endangered firemen and spread the fire. The loss was $250,000.

June 23, Glenwood, Ark. Saw and Planing Mill. Fire protection was inadequate for the large values of combustible materials. The loss was $500,000.

July 9, Olathe, Kan. Grange Building. This large area building housed mercantiles, an armory, a garage, and a public hall. The fire had made great headway and had spread to the top floor when firemen arrived. The value of the armory equipment added to the loss. The loss was $300,000.

August 10, Mt. Pleasant, Iowa. State Hospital for the Insane. Fire had made considerable headway when it was discovered coming out of a cupola over the stage section of the auditorium. Private fire protection was weak. Fire spread through unprotected openings and through the combustible communicating roof space over the burned sections. Several volunteer fire departments, assisted by one paid company, prevented a much larger loss. The loss was $250,000.

October 17, Toulomne, Calif. Lumber Yard. A rapidly spreading forest fire spread to the lumber yard and destroyed more than 9,000,000 ft. of lumber, 85,000 ft. of trams, 2,200 ft. of pile bottoms, 54 lumber trucks, and other property. The loss was $285,000.

November 29, Aberdeen, Miss. Cotton Compress Plant. Fire destroyed the south section of the plant. The large loss was due to the destruction of a large amount of baled cotton. The loss was $445,000.

December 7, Tullulah, La. Veneer and Plywood Factory. Fire started in an under-floor space of the large frame plant. This space was largely unsprinklered. Dense smoke and heavy flooring made the fire inaccessible to the volunteer firemen. The fire burned for several hours under the floor before it spread and destroyed the plant. The loss was $485,000.

December 23, Corcoran, Calif. Milling Plant. This iron-clad building was 400 ft. long and was heavily stocked with wheat, barley, alfalfa, mixed chicken feed, crushed barley, and pancake flour. The loss was $500,000.

International.

Fighting a large warehouse fire. Fire started in the two-story building at the right and entered the grist mill next to it through unprotected window openings. The loss was about $375,000.

New Year Party Fire Fatal to Six Women

SIX young society women lost their lives and seven other persons were seriously injured when cotton trimmed costumes ignited from a lighted match during a costume ball at the Country Club in Selma, Alabama, on the evening of December 29, 1936.

The tragedy occurred while a group of women dressed in costumes designed to resemble Russian ski suits were waiting for the signal to march by twos through an ornamental doorway where they were to claim their partners on the ballroom floor. Just as the music was about to begin and a spotlight was being trained, a glare was seen through the doorway to the dressing room. For a brief instant guests in the ballroom thought that the light was part of the artificial illumination designed to add to the Russian snow scene. In a moment screams were heard and through the doorway rushed one of the women wrapped in flames. The escorts rushed to aid the young woman and attempted to smother the flames with their coats. Another woman ran outside into the yard. One account has it that many of the men ran after these two, ignoring the larger number of women remaining in the dressing room. Some confusion resulted because the victims wore masks and as they were dressed alike it was difficult to tell immediately who they were.

This disaster throws into importance the educational activities to teach people about the hazards of fire. The possibilities of the costumes catching fire had not been ignored. It was first proposed to decorate the costumes with transparent cellulose, but this idea was rejected as the material was assumed to be too dangerously flammable. As a matter of fact, its hazard is about the same as newsprint paper and far less hazardous than the costumes which were chosen. These were all white flannel with Russian tunics edged with white bands of raw cotton and with white oilcloth boots and caps edged with cotton. Such material will burn with great rapidity. Witnesses stated that fire flared over the costumes of the victims with almost the speed of an explosion. One of the costumes set on fire as a test a day or two later was completely consumed in thirty seconds.

Fire prevention education failed with these victims in that it did not stress the importance of treating flammable decorations and costumes with a fire-retarding solution. This is an elementary precaution taken in theatres. On the credit side of the picture, however, a fire department officer observed that the two or three men who best kept their heads in the emergency and went to the assistance of the victims in the dressing room were some which he knew had at one time qualified for the firemanship merit badge of the Boy Scouts; in other words, they had received training from firemen.

Every year during Fire Prevention Week, nurses and other employees of the Orange Memorial Hospital, Orange, N. J., receive instruction from the chief of the fire department. This includes lectures on causes of fires and their prevention, demonstrations on sending a fire alarm, and practice in operating extinguishers. They are also drilled in removing burning bed clothing.

Hospitals and Institutions

What Fire Departments Can Do to Safeguard Lives in These Buildings in Case of Fire

PROBABLY no type of fire is more dreaded by firemen than fires in hospitals and institutions. This is because of the serious possibilities of loss of life occurring among the helpless occupants. In spite of this fact, some fire departments are not prepared to properly handle a fire in the local hospital or institution. Perhaps such departments feel that hospital protection is part of the professional work of the hospital staff. Hospital staffs, however, often appear too busy to give much thought to the possibility of fire. It is necessary for the fire department to insist that hospitals be as fire safe as possible.

Safety to life is the first consideration in buildings housing sick, infirm, and restrained patients. This depends upon fire-safe construction, adequate fire prevention and protection, trained personnel, and proper exits.

Hospitals and institutions are subject to the same common fire hazards as residential types of property with some special hazards in addition. The heating plant should be adequate and maintained in perfect condition. Kitchen ranges should be safely installed with proper hoods and flues. Electrical defects such as defective wiring, overheated appliances, and careless use of electricity cause the greatest number of fires in this class of property, and are strictly preventable. Among the special hazards are the storage and handling of X-Ray film and anaesthetic gases. Cellulose acetate "safety" X-Ray film should always be used in hospitals.

Wherever possible, institutional buildings should be so constructed and protected that it will not be necessary to remove the patients outdoors in case of fire. This can be accomplished by automatic sprinkler protection, adequate first aid equipment, the training of employees on what to do in case of fire, and co-operation by the fire department.

Fire departments will be expected to advise hospital authorities as to the proper procedure for employees in handling fires. The N.F.P.A. Building Exits Code contains detailed instructions. It recommends that the person discovering the fire should immediately give an alarm—using a fire alarm box if one is available, and seeing that all doors adjacent to the fire are closed. He should send another employee to report the exact location of the fire to the main office. Both should return and fight the fire until the fire department arrives. Other employees (who should be equipped with necessary keys for any locked doors such as those to detention wards) should be ready to get patients out of the fire area. If the fire is uncontrollable or has developed a bad smoke hazard, all available employees and firemen should move patients out of the sections involved by rolling or sliding their beds or mattresses through horizontal exits into other cut-off sections; or as a last resort by carrying patients in mattresses down stairs to the outside.

To be completely familiar with the hospitals and institutions in their territory, all members of the fire department have to know the locations of exits and corridors. It is a good plan to have one or two members authorized to make an inspection and prepare for the company a report giving essential information.

Among the most dangerous types of institutional structures from a fire standpoint are the old frame converted dwellings and temporary frame buildings found in many of the smaller communities. Many of these have no fire-stopping in partitions, have open stairways or shafts, and lack proper exits. The fire record shows that more than half of the loss of life which has occurred in hospital and institution fires has been due to improper construction and inadequate exists. All such buildings should at least have automatic sprinklers in the basements, hallways, and service rooms.

Some institutions are surrounded by high walls with locked gates and have no watchman on duty to admit the fire department in case of fire. This is exactly what happened at the fire which took 48 lives when a home for the aged burned in Pittsburgh, Pennsylvania, in 1931. Provision should be made to promptly open entrances for the fire department. If necessary, duplicate keys might be carried on the apparatus.

□ □ □ □ □

Indiana Fire Marshal Prepares Fire-Loss Map

The excellent fire loss map of the State of Indiana is reproduced on the opposite page through the courtesy of Clem Smith, Chief of the Indiana State Fire Marshal Department. The original map is 22 by 29 in. in size, and has been widely distributed throughout the state.

This is an interesting way of illustrating the common causes of fires and comparing city with rural fire losses in the different counties. The fact that 74 percent of the rural property involved in fires was destroyed, as compared to just a little over 5 percent of the city property involved, shows that much rural property in the state still lacks fire protection.

FIRE LOSS – STATE OF INDIANA

YEAR ENDING MAY 31, 1936

COMPILED BY INDIANA STATE FIRE MARSHAL DEPARTMENT

INSPECT YOUR PROPERTY CAREFULLY AGAINST THESE HAZARDS

Sparks on Wood Shingle Roofs—1,481 Fires Loss $565,996.00

PREVENTION
Fire Resistive Roofs
Spark Arresters

Defective Flues, Chimneys & Stove Pipes . . . . 845 Fires Loss $530,872.00

PREVENTION
Inspect each year. Clean and repair as needed.

Defective and Overheated Stoves and Furnaces—355 Fires Loss $284,586.00

PREVENTION
Proper Installation
Repairs.

Lightning—82 Fires Loss $129,636.00

PREVENTION
Install Approved Lightning Rods.

The Farmer's Worst Enemy

Spontaneous Ignition—128 Fires Loss $268,717.00

Defective Electrical Wiring—Overheated Electrical Appliances on 319 Fires Loss $394,344.00

Unguarded rubbish Fire destroys 15 Buildings in Dunkirk Loss $88,850.00

Starting Fires with Kerosene

Drycleaning

Bonfires

1 Dead 9 Injured

Matches—132 Fires Loss $46,541.00

Smoking—224 Fires Loss $50,281.00

Inflammable Liquids 70 Fires Loss $33,433.00

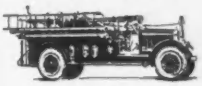
Defective Oil Stoves, Burners and Explosions—273 Fires Loss $241,488.00

40 DEAD 169 INJURED

City property involved in fires $47,393,736
Loss sustained $ 2,596,169
Percentage of loss 5.5+%
Rural property involved in fires $3,353,934
Loss sustained $2,451,463
Percentage of loss 74%

The difference in loss ratio is due to fire protection provided in towns and cities, whereas most all rural properties are unprotected.

PROVIDE THIS TYPE OF PROTECTION



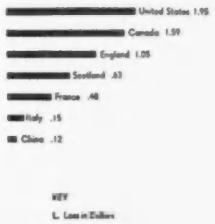
Township Trustees are the Fire Chiefs of their respective townships and may and should provide this protection.

NOTE: Statistics pertaining to the rural fire losses are estimated to be 12% low due to the neglect of responsible parties submitting reports.

YEAR	No. FIRES	AMT IN DOLLARS
1913 X	6,309	5,932,110
1914	8,005	7,926,936
1915	7,106	5,754,863
1916	6,018	6,437,957
1917	5,764	6,179,436
1918	4,967	7,055,090
1919	5,348	8,178,338
1920	5,083	8,228,096
1921	4,510	6,671,838
1922	5,887	7,428,316
1923	5,956	7,886,802
1924	5,210	7,096,312
1925 X	4,072	6,544,995
1926	4,192	6,554,980
1927	4,246	5,039,105
1928	4,777	6,874,263
1929	5,005	8,026,667
1930	5,846	9,665,799
1931	6,593	8,102,333
1932	5,107	6,678,061
1933 X	4,106	4,853,672
1934	6,000	6,012,475
1935	4,561	4,348,843
1936	5,380	5,347,623

X. Fire Loss for Nine Months Period

Per Capita Fire Loss in Different Countries

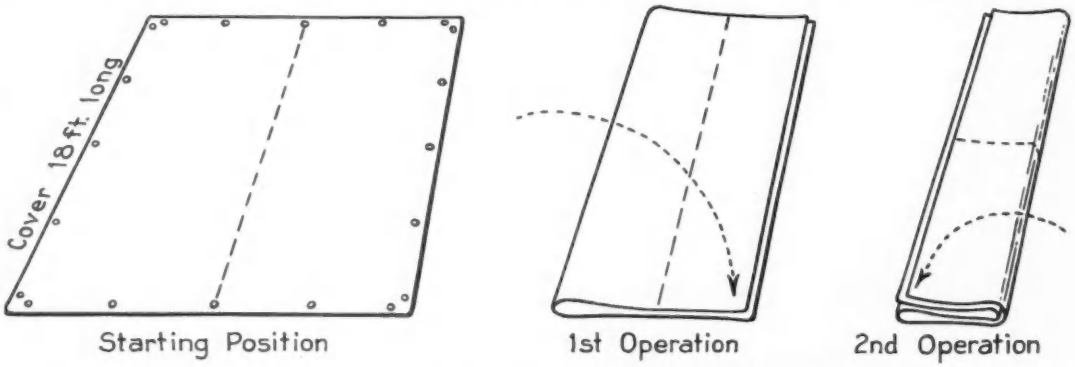


KEY
L. Loss in Dollars
C. City Fire Loss in Dollars
R. Rural Fire Loss in Dollars
P. C. Loss Per Capita

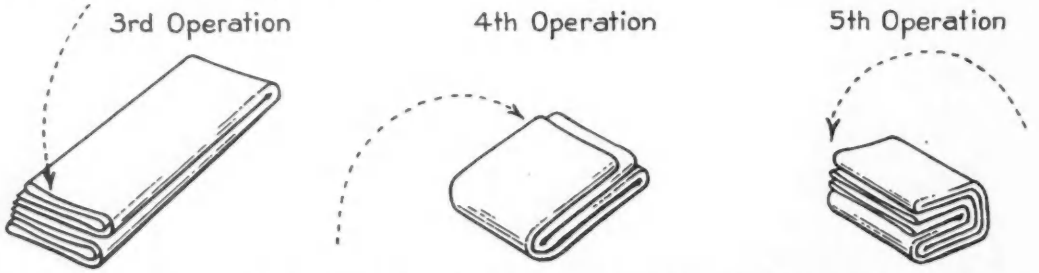
MAPS BY COURTESY OF
Farmer's Mutual Liability Company
Simon Dexter's Fraternal Mutual Fire Insurance Co.
Indiana Farmer's Mutual Insurance Company
Indiana Lumbermen's Mutual Insurance Company
Indiana Union Mutual Insurance Company

Salvage Cover Fold for Two-Man Use

A simple salvage cover fold and one that is pretty well standardized throughout the country is the two-man fold described below. The sketches illustrating the operations are drawn from recommendations made by Chief J. W. Just of the Fire Department Instructor's Conference which is sponsored by the Fire Prevention Department of the Western Actuarial Bureau.



The fold is started with the cover stretched out flat as shown. The first operation is to fold it in the center by bringing over one long edge and laying it on the other edge. Most covers are 18 ft. long and may be from 12 ft. to 18 ft. wide. The dotted lines on the sketches indicate the centers where the folds are to be made. For the second operation both long edges are brought back to the center fold. (The arrow on each sketch shows the direction of fold for making the operation.) Note that each operation is made by starting at the place where the previous operation was finished. This cuts down the number of steps necessary to take in making the fold.



One of the ends is now carried over and placed on top, and even with, the other end.

The two ends just brought together are now folded over in the opposite direction.

The final fold places the cover in convenient form for one man to pick up and carry.

Using the Folded Cover

The cover should be carried on the left shoulder with the edges toward the body. In spreading, the man carrying the cover hands his teammate the double and the two single corners next to the top fold, retaining the lower double and single corners. They pull the cover apart. When in position to cover, both men drop the double edge and the single edge nearest to the material to be covered. They then have a single edge with the cover on the floor. The men then take several laps of the single edge in their hands and throw the cover as far over the stock as possible. The cover is then pulled into position. To obtain good results, practice and teamwork are essential.

For companies where it is likely that one man may have to spread covers alone, a one-man fold was described in the May, 1935, issue of VOLUNTEER FIREMEN.

Discussion Subjects

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Q. What are the possibilities of fires in the local hospital or institution, and what can the fire department do to safeguard the lives of the occupants should a fire occur?

A. In addition to the common fire hazards found in residential property, hospitals and institutions present special hazards. See page 4 for a complete answer to this question, including suggestions on how fire departments can co-operate with the hospital staff in preventing loss of life from fire.

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Q. Demonstrate a salvage cover fold that is easy to make and use by two men.

A. A standard fold for two-man use is illustrated and described on page 6.

Problem Questions FOR FEBRUARY

Suggested for discussion at company and department meetings this month

55

Discuss methods of removing water from basements or cellars.

56

What are the most frequent causes of fires in buildings under construction and how may they be prevented?

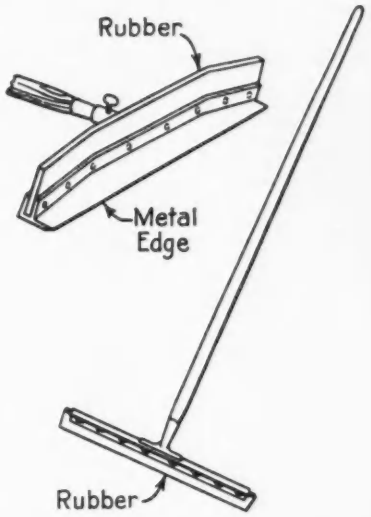
Watch for the answers in the next issue of VOLUNTEER FIREMEN

Second Hand Truck Costs Town $80,000

SOME city and town officials have the wrong idea about economy. This was recently demonstrated in a small town in Indiana where the city purchased a second hand fire truck. A fire was discovered and the truck refused to start. The truck burned up along with the fire station, 23 business buildings, and one residence.

The loss was estimated at $80,000. In reporting this case, the Fire Department News Letter of the Kansas State Firemen's Association asks the question: "What did the town actually save by purchasing a cheap and unreliable fire truck?"

Fire Tools



Squeegees or Squilgees

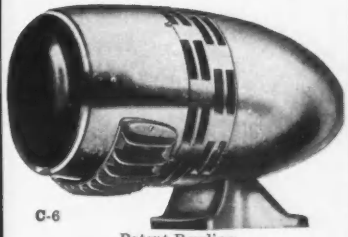
AMONG the principal pieces of equipment carried on ladder and salvage trucks are tools to reduce water damage to property. At least four or six squeegees (also called "squilgees") are generally found along with other salvage equipment such as covers, brooms, mops, sponges, and chamois. Fire companies find it to their advantage to use all reasonable means during and after fires to prevent excess water from ruining furnishings and stock.

Several types of squeegees are on the market. The ordinary types have straight rubber blades 18 to 30 inches wide fastened in a metal holder which is attached to a wooden pole handle about five feet long. Handles sometimes come in sections so that they will take up less space on the truck. Most squeegees are made so that new rubber blades can easily be inserted when the old ones are worn down.

The squeegee shown at the top in the illustration has the two ends of the rubber blade curved forward so that a pocket is formed to hold the water as the tool is pushed in front of the operator. This tool also has a straight metal edge for removing heavy débris or ice.

In addition to cleaning off excess water from floors and other surfaces after fires, squeegees are also used for cleaning fire station floors.

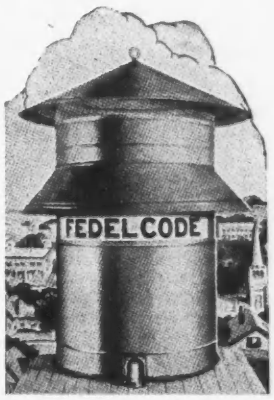
Introducing
FEDERAL C-6
LONG ROLL—TWO TONE RED FLASHING LIGHT



Patent Pending

SIREN

Again *Federal* is first with the best. Absolutely *new*. This siren has two distinct tones. One high, shrill, penetrating; the other low in pitch for farthest carrying qualities. A long ball bearing roll, for more than two minutes after current is shut off. That saves your battery. A large flashing light that throws a beam of light through fog and darkness, and an electric brake that instantly silences the siren by the touch of a button. Compact, strong, precision built to withstand all the abuses that a siren gets on a busy piece of equipment. *Write for our new bulletin number 56.*



Federal Vertical Siren Mounted on Tower.
Approved by the National Board of Fire Underwriters.

Federal VERTICAL Sirens are most practical because

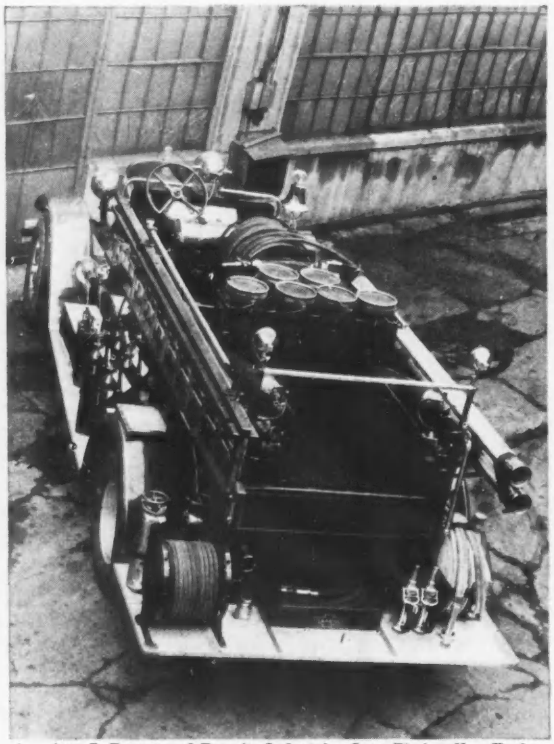
(1) They distribute sound in a wide range in all directions.
(2) Rugged in construction to withstand all kinds of abuse.
(3) Entirely weatherproof housing finished in Red Duco withstands sleet, rain, hail and dust storms.
(4) They are equipped with special high speed, ball bearing Federal Siren motors.

Write for Bulletin No. 55 for complete details.

FEDERAL ELECTRIC CO.
8717 SO. STATE STREET, CHICAGO

Volunteer Firemen Presents a Dla

Hose and Ladders Are not Enough for Modern Fire Service — Rescue, Salvage, and Flood Lighting Kits Are Essential to Back Up Pumpers and Ladders



American-LaFrance and Foamite Industries, Inc., Elmira, New York.

This crash truck for use at airports has a 500-gal. pump; 200-gal. booster tank; foam-solution tanks and hose; foam generator and powder; four 50-lb. CO_2 tanks and reel; foam, and CO_2 portable extinguishers; gas masks; hose; nozzles.

Garrison Engineering Corp., Great Barrington, Massachusetts.

Besides the usual equipment this 500-gallon pumper is equipped with two 350-lb. cylinders containing dry chemical for use through a booster hose on flammable liquid fires.

International Harvester Co., 606 South Michigan Ave., Chicago, Illinois.

This Charlotte, N. C., floodlight truck is equipped with a 5000-watt generator. It has eight portable lights besides the fixed lights on top, and carries rescue and other special equipment.

Diamond T Motor Car Company, 4517 W. 26th Street, Chicago, Illinois.

Enclosed rescue squad truck recently delivered to Omaha, Neb. In addition to usual rescue equipment and a 5000-watt generator with six floodlights, there is a field-hospital kit.

Mack-Internat'l Motor Truck Corp., 48th Ave. & 34th St., L. I. City, N. Y.

This 750-gallon pumper delivered to Lake, Wis., carries its own water, 2500 gallons of it, in addition to 500 ft. of 2½-in. hose and 750 ft. of 1½-in. hose. The cab seats three men.

This display is made up of illustrations showing styles of special-duty fire trucks for different conditions of service, chosen those

Display of Special-Duty Fire Trucks

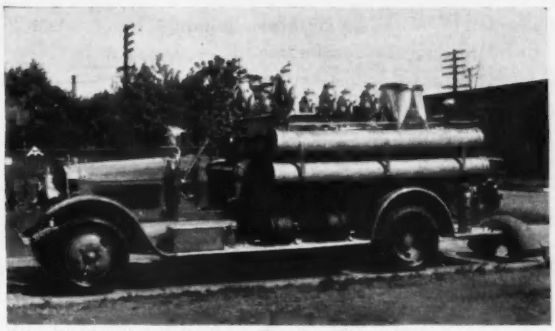
Among the Smaller Fire Departments a Combination Special-Duty Truck with Rescue and Auxiliary Squad Equipment May Also Carry an Extra Pump and Hose

Maxim Motor Company, Middleboro, Massachusetts.

Salvage truck delivered to the Pleasantville, N. Y., Volunteer Fire Patrol. It is equipped with a squad body, booster pump, foam generator, and floodlights.

Seagrave Corporation, Columbus, Ohio.

This Bakersfield, Calif., squad truck has compartments for rescue equipment and ladders, carries a generator and floodlights, a booster pump, and a monitor nozzle.



Peter Pirsch and Sons Company, Kenosha, Wisconsin.

A smoke ejector similar to that which saved 16 lives in the 1931 Chicago tunnel disaster was delivered to the Hyattsville, Md., volunteer department. It also carries floodlights and a booster pump.

Walter Kidde and Company, 140 Cedar Street, New York City.

This carbon dioxide truck of the Jackson Hose Company of Nyack, N. Y., has four 75-lb. carbon dioxide tanks, portable carbon dioxide and water extinguishers, and 1000 ft. of 2½-in. hose.

Sanford Motor Truck Company, Syracuse, New York.

This emergency truck has a squad body with seats and lockers, a 400-gallon pump and usual pumper equipment, and carries a 1250-watt portable generator and three floodlights.

Ward LaFrance Truck Corp., Elmira, New York.

This flood lighting truck delivered to Chambersburg, Pa., carries a 2000-watt generator supplying three floodlights, rescue equipment, a 200-gallon booster pump, and 2½ and 1½-in. hose.

Mention those of manufacturers most of which furnish a complete line of apparatus. Mention **Volunteer Firemen** when writing them.

Volunteer Fireman

Professional Journal of the Volunteer Firemen's Section of the National Fire Protection Association

Published by the National Fire Protection Association, a voluntary non-profit organization, 60 Batterymarch Street, Boston, Massachusetts, U.S.A.

Volume 4 **February, 1937** Number 2

Ten Interesting Fire Stories The 112-page January issue of the QUARTERLY Magazine which has just been mailed to N.F.P.A. members contains ten complete articles on interesting fires in various parts of the country. Fire fighting operations are given in detail, and each story teaches a valuable lesson in fire prevention. In addition, the January issue contains a fire record of gasoline filling stations, data on air foam, 1936 fire loss information, and much other valuable material of interest to firemen. Firemen belonging to companies that are members of the N.F.P.A. should be sure to read the copy received at headquarters.

Sent with the January QUARTERLY was a 48-page index of subjects listed in the N.F.P.A. publications during the past ten years. This is a valuable pamphlet when looking for data on any fire protection subject.

Bucket Brigade, Current Style Volunteer firemen are given a fine recognition and appreciation in Henry Morton Robinson's article "Bucket Brigade, Current Style" in the January, 1937, issue of ESQUIRE Magazine. We quote a few extracts from the article herewith.

"But the time has passed when one can collapse into a haymow laughing at the antics of Volunteer Fire Departments. Today, the difference between them and their professional brethren is precisely the difference between a well trained militia and a standing army. The volunteer dedicates himself to the same tasks and takes the same risks as the professional fire fighter. The great difference between them is that the volunteer receives no cash compensation and it is this unique combination of altruism and courage that makes him worth painting murals about.

"A small volunteer company doesn't happen by accident. Its members must be intensively drilled in the special business of handling fires, and today they are drilled like West Pointers at fire colleges all over the United States.

"The tax economies made possible by this remarkable volunteer system have never been calculated but conservative estimates place these savings at one billion dollars a year. To pay salaries and buy uniforms for the present army of volunteers would mean a yearly outlay of half a billion dollars; the cost of new fire engines, stations and alarm systems plus repairs on the old would aggregate another half billion. Yet these are charges that do not appear on the tax bills of 60 million citizens whose lives and property are protected by volunteer fire companies.

"When he isn't drilling or reading VOLUNTEER FIREMEN a magazine published solely for his benefit. . . .

"The volunteer fire departments of the United States constitute a modernized defense against the ever-present fire peril, but perhaps more important yet, they keep alive the spirit of voluntary and independent association, traditionally dear to the American heart."

Fire Prevention Manual For 4-H Club Members A valuable 21-page manual of suggestions for eliminating fire hazards in farm homes and other buildings has just been published by the Extension Service of the Kansas State College, Manhattan, in co-operation with the Fire Division of the State Department of Inspections and Registration at Topeka. It was issued primarily for members of 4-H clubs in the state, but contains information helpful to anyone interested in reducing farm fire losses.

Statistics show that there are about three times as many city fires as farm fires in Kansas, but the total loss in the farm fires is about the same as in the city fires. This indicates that farm fires are much more destructive than city fires where better protection facilities are available. The manual points out that proper advance planning and preparation are necessary to prevent farm fires and to permit immediate extinguishment after they start. Lack of facilities for fighting farm fires usually results in the total destruction of the buildings.

1478 New Members and Renewals Last Month Since the last issue 519 men from 19 fire departments or companies enrolled in the Volunteer Firemen's Section for the first time, and 959 firemen from 44 departments or companies renewed their memberships — making a total of 1478 men from 63 departments to enroll or renew during the past month. The 19 new departments are listed below.

Pound Ridge Volunteer Fire Department, New Canaan, Connecticut.
Stratford Fire Company No. 3, Lordship, Stratford, Connecticut.
Hebron Volunteer Fire Department, Hebron, Illinois.
Constantine Fire Department, Constantine, Michigan.
Washington Truck Company No. 2, Washington, New Jersey.
Akron Fire Department, Akron, New York.
Ausable Forks Fire Department, Ausable Forks, New York.
Sanford Hose Company No. 1, Sanford, North Carolina.
Spindale Fire Department, Spindale, North Carolina.
Woodward Fire Department, Woodward, Oklahoma.
Cochrane Volunteer Fire Brigade, Cochrane, Ontario.
New Toronto Fire Department, New Toronto, Ontario.
Windsor Fire Department, Windsor, Ontario.
Hose Company No. 1, Greensburg, Pennsylvania.
New Kensington Fire Department, New Kensington, Pennsylvania.
Colome Volunteer Fire Department, Colome, South Dakota.
Cathlamet Fire Department, Cathlamet, Washington.
Pomeroy Fire Department, Pomeroy, Washington.
Genoa City Volunteer Fire Department, Geona City, Wisconsin.

PIRSCH MAINTAINS THE "LEAD" IN POWERED AERIALS

ORIGINALITY AND EXCELLENCE IN DESIGN • PROPER CONSTRUCTION • OPERATING SMOOTHNESS • SALES

*Pirsch Hydro-Mechanical Tractor Drawn Aerials have been sold to:

Washington, D. C. (2)
Minneapolis, Minn. (3)
Memphis, Tenn. (3)
St. Paul, Minn.
Spokane, Wash.
Lawton, Okla.
Cambridge, Mass.
Melrose, Mass.
Southbridge, Mass.
Mahanoy City, Pa.
Harrisburg, Pa.
Davenport, Ia.
Winston-Salem, N. C.
Dallas, Tex.
Kenosha, Wis.
Pittsburgh, Pa.

*Junior and Intermediate Service Aerials:

Duluth, Minn.
Rochester, Minn.
Winona, Minn.
Moorhead, Minn.
North Arlington, N. J.
Huron, S. D.
Thompsonville, Conn.
Winsted, Conn.
Marshalltown, Iowa
Independence, Kans.
Billings, Mont.
Elgin, Ill.
Burlington, N. C.
Mt. Oliver, Pa.
Punxsutawney, Pa.
New Ulm, Minn.
Albany, Ga.
Waukegan, Ill.

*Sales listed above include both wood and metal ladders.

Pirsch Designed and Built America's First:

1. Hydraulic Aerial Ladder Hoist
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4. Power Operated Operating Deck
5. 100′ Aerial Ladder
6. Aerial Ladder of Metal Alloy
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8. Modern Motor Driven Aerial Truck wherein Man-Power as means of performing essential functions was eliminated

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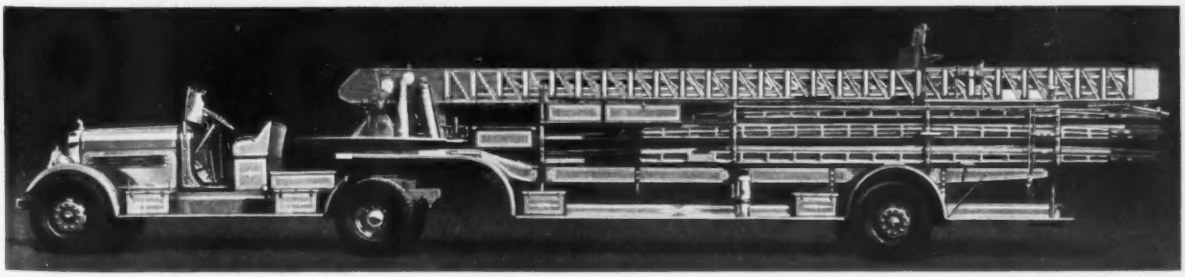
1. The All Metal Pirsch Aerial Ladder is only 1/3 the weight of steel and 2/3 the weight of wood, but stronger than either.
2. Time tested methods of fabrication are used in the construction of the Pirsch Metal Ladder. Rivets have been used for years in tall structures, derricks, bridges, trestles, etc. That method of fabrication is considered best by authorities. The Pirsch ladder is the strongest and most durable ladder built.
3. The metal will not rust and thereby weaken the ladder.
4. The Pirsch Hydraulic Ladder Hoist operates at low, safe pressures.
5. The Pirsch aerial is equipped with hand or manual auxiliary mechanism for all maneuvers.
6. The Pirsch submerged tiller seat is the only improvement ever made with the thought in mind of guarding the tillerman's life.

CUT BELOW SHOWS PIRSCH 85′ AERIAL WITH 3 PIECE METAL LADDER



PETER PIRSCH & SONS CO. Kenosha, Wisconsin

OPPORTUNITY FOR VOLUNTEER FIREMEN

In many localities in the United States we have openings for Fyr-Fyter Dealers which should be appealing to Volunteer Firemen because of their particular interest in fire fighting and Community Safety. Fyr-Fyter Dealers are (at the present time) earning more money than many merchants and manufacturers in their territories who have thousands of dollars invested in stock and are obligated to a regular weekly or monthly overhead covering rent, help, light, heat, etc.

If you are interested in creating a business for yourself (without the usual expense of such an undertaking), write to us. If your territory has no Fyr-Fyter Dealer or our representation is inadequate, we will be pleased to present to you our sales plans which enable you to become an independent merchant in your territory.

When writing, give fully your past business experiences and address your letter to

THE FYR-FYTER COMPANY
Dept. 20-14 DAYTON, OHIO

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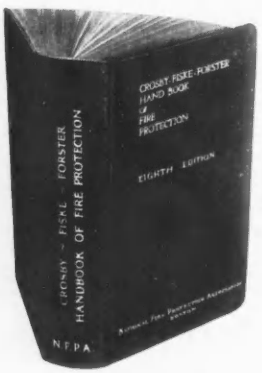

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1154 pages; 4¼ x 6½
242 illustrations, 161 tables
Handsomely bound
$4.50 postpaid

National Fire Protection Association
60 Batterymarch Street
Boston, Massachusetts

Membership Plan

Volunteer Firemen's Section National Fire Protection Association

WHERE 20 or more firemen in a volunteer company or department affiliate with the Volunteer Firemen's Section the cost is 50 cents a year *per man*. Each fireman will receive one copy of VOLUNTEER FIREMEN, the monthly journal of the Volunteer Firemen's Section, mailed regularly to his home address. The company or department automatically becomes a member of the National Fire Protection Association and is entitled to full privileges of membership. All the literature regularly issued to N.F.P.A. members is mailed to headquarters of the company or department.

Membership may be applied for by one member of the company or department collecting 50 cents for each of the 20 or more members and making a single remittance for the group, or the company or department may take a membership for its men and make a single remittance from the company or department treasury.

Companies With Less Than 20 Members

Because of the large amount of material mailed to members, not less than $10.00 can be accepted from any company or department for membership dues. In the case of companies or departments with less than 20 men this means that the cost divided among them will be slightly higher per man. Of course, some such companies or departments may prefer to make a single remittance of $10.00 from the company or department treasury. In other cases a few interested citizens, not members of the company or department, may be glad to contribute 50 cents apiece to make up the required minimum of 20, so that the members may secure the rate of 50 cents per man.

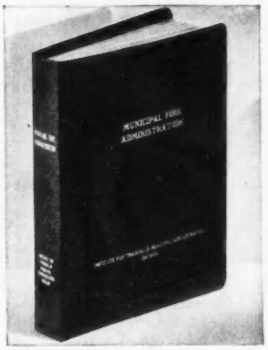
These companies or departments have full privileges of N.F.P.A. membership as above, and each member receives the monthly magazine, VOLUNTEER FIREMEN, at his home.

If you are a fire commissioner, city manager, fire chief or fire department officer, or if you hold any other administrative position in your local government, or aspire to such position—

KEEP AHEAD OF YOUR JOB

by enrolling in a Practical Correspondence Course in

FIRE ADMINISTRATION



A 600-page volume comes with the course and contains material never before found in print.

WHILE sponsored by city managers as a part of the in-service training program of their profession, here is a course which has a value to everyone who has anything to do with the direction or operation of a fire department. The problems of volunteer and part-paid fire departments, including such typical ones as those of equipment, rural water supplies, mutual aid and county organization are given equal attention with problems of the larger city fire department. Available nowhere else is the data included from more than 200 cities covering fire department personnel, stations, insurance costs and fire losses. The nominal fee of $25 for the course covers the above text (which the student may keep), the course of lessons, and personal review and correction of lesson papers.

Outline of Course in FIRE ADMINISTRATION

The Municipal Fire Problem.
Fire Insurance Classification of Cities.
Organization for Fire Protection.
Personnel Administration.
Water Supply for Fire Service.
Department Buildings and Equipment.
Distribution of Equipment and Personnel.
Fire Alarm Signaling Systems.
The Technique of Fire Fighting.
Legal Aspects of Fire Prevention.
Work of Municipal and State Fire Prevention Agencies.
Fire Investigation and Incendiarism.
Records and Measurement of Results.

Institute for Training in Municipal Administration
850 East 58th St., Chicago, Ill.

Please send me particulars and application form for the Course in Fire Administration. This does not obligate me to take the course.

Name .....
Address .....
(VF237) .....

Making a Good Job of It

By Warren Kimball

In this column each month an experienced volunteer fireman discusses the handling of a typical fire. Readers are invited to describe fires which illustrate one or more principles of craftsmanlike fire fighting. (Names and places may be omitted.)

A FIRE which recently destroyed several business buildings in a Minnesota town is of interest because it illustrates some of the difficulties which volunteer firemen may encounter in any community where adequate building regulations have not previously been enforced. The fire occurred in a one-story brick grocery store building and caused a $40,000 loss.

A clerk in the grocery store started a furnace fire. He threw into the furnace some sweeping compound which caused the furnace to overheat. In the basement near the furnace was a pile of rubbish which the fire chief had ordered removed while he was inspecting the store a few days before the fire. This order had not been obeyed and the rubbish ignited. When the alarm was given the entire basement was in flames.

The only opening from the sidewalk to the basement was partitioned off for use as a coal chute. There were two inside stairways to the basement but the firemen were unable to get down them due to the extent of the fire. Flames soon burned through a wooden basement partition into an adjoining hardware store where three barrels of linseed oil ignited, spreading the fire. The fire department used two pumpers and six hose streams in controlling the fire which damaged four stores. The building inspector has stated that the destroyed buildings cannot be replaced unless there are outside openings to the basement and the boiler is placed in a cut-off concrete room.

Cellar fires are among the most difficult to fight, particularly when inaccessible from the outside. When men with hose lines cannot immediately "make" the stairs they should attempt to check the upward spread of the fire while cellar pipes and distributor nozzles are used through holes in the floor to control the seat of the blaze. A shut-off gate should be placed fifty feet back of the nozzle on all lines supplying cellar nozzles. Adequate ventilation of the building and gas masks are very important in fighting serious cellar fires.

Have WEED CHAINS ready for DANGEROUS DRIVING DAYS

● Any man riding or following fire apparatus soon learns the danger of winter driving. In ice, packed snow or mud he uses tire chains both on equipment and his private car.

The best buy is WEED American Bar-Reinforced Tire Chains. They have reinforcing bars double-welded across cross chains, giving better road grip and a double thickness of metal to wear through. Read the four great features below. They tell you why the better accessory stores, garages and service stations recommend WEED American Bar-Reinforced Tire Chains.

1 Bar-Reinforced cross chains more than double safe mileage.

2 Electric welded hardened side chains resist curb friction and rut wear.

3 Lever-Lock End Hooks make chains easy to put on, easy to take off, hold them securely.

4 Weedalloy used in WEED Chains is the newer, tougher, harder, wear-resisting tire chain metal.

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SHUREDRY is the cover that fire chiefs all over the country have endorsed for superior service.
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Can You Use Ten Dollars?

If You Can, Submit Your Story in Pyrene Letter Contest — Cash Prizes This Month

AS AN introduction to his letter which wins Honorable Mention this month, Mr. C. J. Koob says, "Our company has used all types of hand extinguishers so often that we have never considered them anything but commonplace. Reading the letters in this contest has brought home to us the remarkable job that this type of equipment can do, and has recalled a number of incidents where great loss was prevented by the proper use of hand extinguishers."

This is true in practically every fire department. Why not take advantage of the opportunity and send in one of your experiences with hand extinguishers? Your letter may win one of the three cash prizes offered each month in this contest sponsored co-operatively by the Pyrene Manufacturing Company of Newark, N. J., and VOLUNTEER FIREMEN.

FIRST PRIZE — $10.00

S. E. BRENTARI, *Chief*,
Fire Department, Gallup, N. M.

Rewarded for Saving Locomotive

"On November 20, the new Santa Fe Super-Chief locomotive was leaving town at about 80 miles per hour. When about six miles out in the desert country, heavy smoke was suddenly discovered coming from one of the Diesel units. Flames were leaping from under the cab where the oil tanks were located.

"Someone ran a mile to a phone. My driver and I responded—making the six miles in nothing flat. Five other volunteers soon joined us. We used up one 35-gallon soda-acid tank and four foam extinguishers. This brought the fire under control, but didn't put it out, so we shoveled dirt on the tanks and smothered the flames. Fire broke out again, and as luck would have it an east-bound train came along. We had it stop beside the Super-Chief, and opening the cab doors of the Super-Chief, we had the engineer of the east-bound train open his blow-off petcock into the cab doors, and finally the fire went out.

"Our volunteer department was highly praised by railroad officials and the builders of the locomotive. They awarded us $150 for our work."

SECOND PRIZE — $3.00

JOHN J. FAIRCHILD,
Fire Department, Belchertown, Mass.

Two Extinguishers Save Bridge

"At a point 2½ miles from our fire station, a branch of the Boston and Maine Railroad crosses the Central Vermont by means of an overhead wooden bridge. About eleven o'clock on a spring night, a man living near the place called me by telephone to inform me that the bridge was on fire. At that time we had no organized department. Our equipment consisted of one chemical truck and about 25 extinguishers.

"Raising a small extension ladder from the track under the bridge up against an abutment, I was able to extinguish the flames underneath the ties with one extinguisher, while the man who had called me walked onto the bridge with two more extinguishers and finished the job. The extinguishers were of the 2½-gallon soda-acid type."

THIRD PRIZE — $2.00

W. H. WEIDENSALL, *Captain*,
Fire Department, Beckley, W. Va.

Puts Out Two Fires in One Hour

"On November 20, 1936, I received a fire call to a colored school in our east park section. When I arrived smoke was coming out around the eaves of the roof. I grabbed a 1½-quart carbon tetrachloride extinguisher and ran into the building and found that the wiring was shorted.

"I threw the light switch and went up into the loft. The first thing I saw was a bright blaze along the rafters. I put the extinguisher to work, and in a few seconds the fire was out with less than $10 damage to the building.

"Fifty-five minutes later I had another call to an auto fire. I answered it, and within 20 seconds I had the fire out, using the same extinguisher."

HONORABLE MENTION

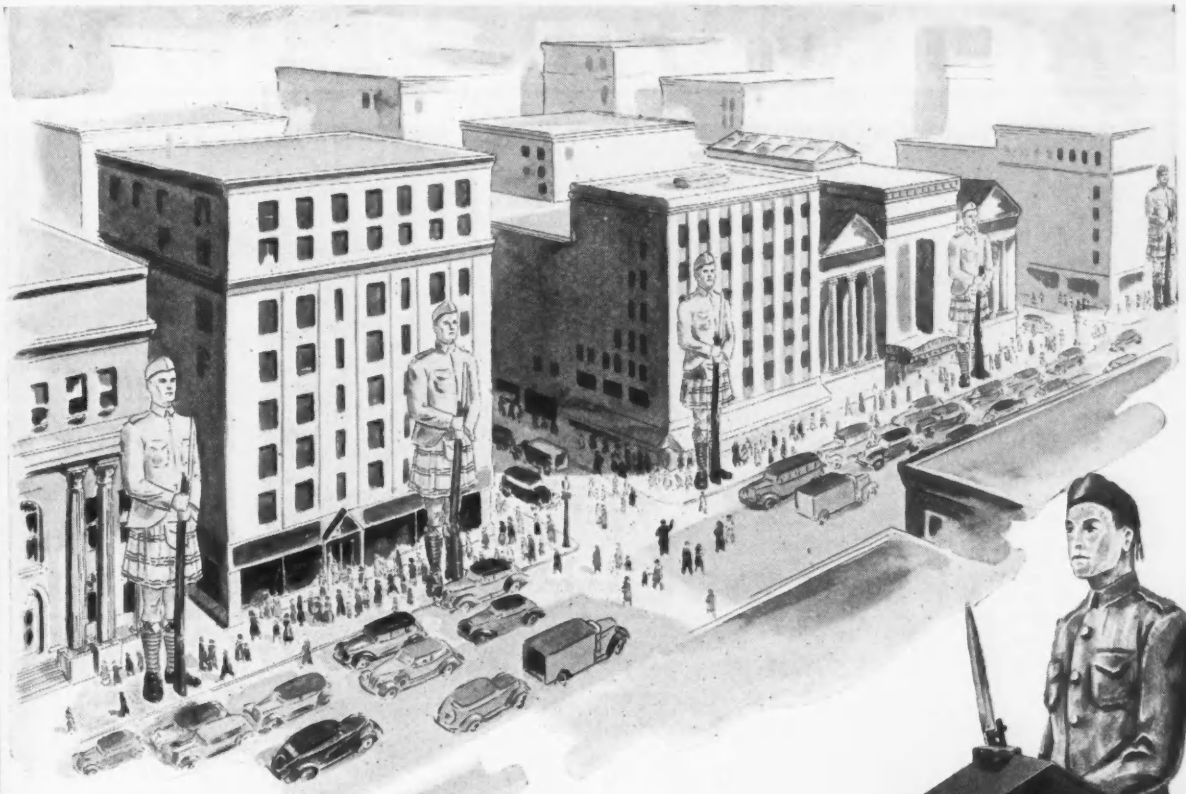
GEORGE R. CARLTON, *Chief*,
Volunteer Fire Dept., Lake Village, Ark.

JAMES MCCUSKER,
Fire Department, Claremont, N. H.

C. J. KOOB,
Highland Park Fire Co. No. 1,
Township Fire Dept., Upper Darby, Pa.

CONTEST RULES

1. Contestants in the Pyrene Prize Letter Contest must be members of their local fire department.
2. Letters are to describe actual experiences where any approved fire extinguisher of any make has saved lives or property.
3. Trade names may be used but will be deleted in publication. Publishers reserve the right to edit winning letters to permit publication.
4. Each contestant automatically vouches for the truth of the facts presented from his own or others' experience.
5. Only one letter may be submitted each month.
6. Letters must be legibly written in ink or typewritten on white paper, one side only. Preference will be given to letters not over 250 words in length.
7. Letters received after the 8th of the month will be judged in following month's competition.
8. Monthly prizes in cash will be: 1st, $10.00; 2nd, $3.00; and 3rd, $2.00.
9. Address contest letters to Pyrene Prize letter Contest, National Fire Protection Association, 60 Batterymarch St., Boston, Mass.



On Guard

Fire Alarm Boxes—Sentinels of the Fire Department —are continuously On Guard. In nearly 2000 municipalities—in many instances for more than 60 years — these Sentinels have been protecting the factories, commercial establishments, institutions, and homes near which they are stationed.

Irrespective of the hour or weather conditions, the Sentinel is always On Guard — always ready — to instantly sound the alarm and direct the fire-fighting forces to the scene of fire.

Write for 40-page descriptive catalog.

The Vitaguard Fire Alarm System is designed especially for Volunteer Fire Departments.

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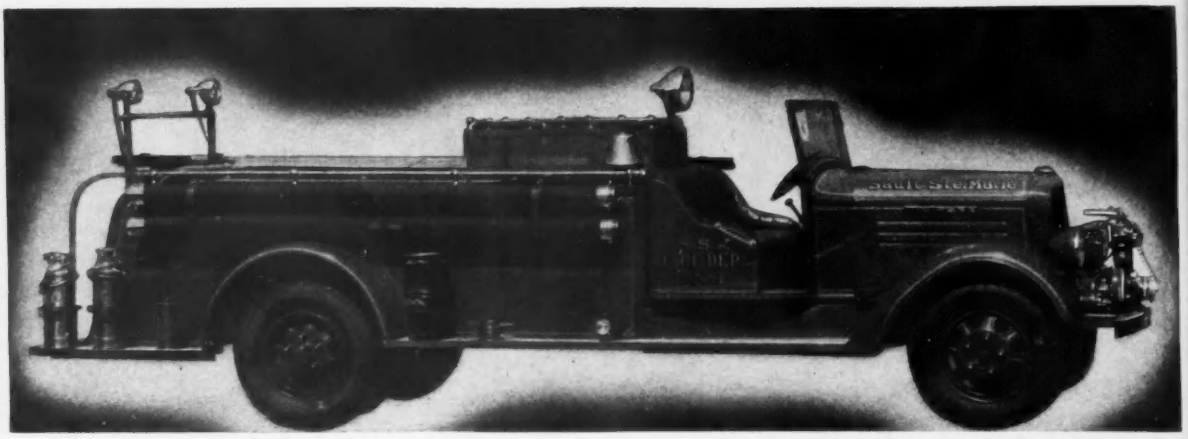
NEWTON UPPER FALLS, MASSACHUSETTS

BARTON FIRE PUMPS



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Marvelous Performance at LOW COST!

Barton Fire Pumps are recognized the world over as the best and most economical answer to the majority of fire protection problems.

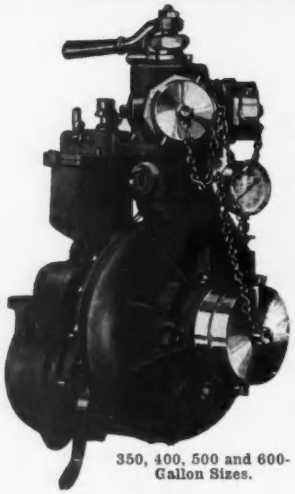
Unlike rotary and piston types, a modern Barton Centrifugal Pump has NO PARTS SUBJECT TO DAMAGE OR EXCESSIVE WEAR when pumping the dirtiest water.

Thus with a Barton you are not limited to pumping from city hydrants. In fact, every day Barton Pumps—automatically primed—are called upon to fight country and suburban fires, delivering huge volumes of water at smashing pressures from ponds, cisterns, rivers, etc.

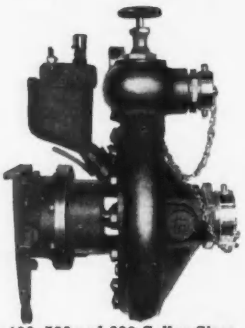
Any Barton Pump can be completely installed on a standard truck WITHOUT A SINGLE CHASSIS CHANGE. A good mechanic can do the entire mounting job in a few hours—entire expense but a few dollars.

New Edition (No. 4) of Bulletin 75
Contains Valuable Fire Stream Data

Write for your copy today! Learn about these wonderful Barton Pumps—how you can effect BIG SAVINGS and still have the finest pumping equipment. And, besides, our copyrighted Fire Stream Data will be found very useful.



350, 400, 500 and 600-Gallon Sizes.



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with Built-in-Gear-Drive for High Pressures at LOW Motor Speeds

This is the Barton DeLuxe Line —"World's Finest Front-Mounted Fire Pumps." All sizes Underwriters' tested. All ratings based on pumping from suction. When pumping from hydrant, every size delivers far in excess of its rating. Built-in Gear-Drive means that truck motor operates at approximately one-half pump speed. With a U-Type Barton Pump wide open, THE MOTOR LOAFS ALONG UNDER NO STRAIN.

F-TYPE PUMPS

with Direct-Drive

These three Barton Fire Pumps—also Underwriters' tested — have every feature offered by the U-Type Pumps, except the Gear-Drive. They are Direct-Drive Pumps, operating at direct motor speeds. This construction makes for lower cost. In fact, for the capacities they deliver, the F-type Pumps sell at the very lowest prices on record.

And we also build smaller fire pumps for booster service at even lower prices—ask us about them!

AMERICAN STEAM PUMP COMPANY

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